

REMARKS

The following is a response to the Office Action dated September 25, 2006. Claims 1-24 are currently pending. New claims 21-24 have been added. Applicant appreciates the Examiner's indication of allowable subject matter in claims 1-20. Reconsideration of this application is respectfully requested in view of the remarks below.

Claims 1-20 stand rejected under 35 U.S.C. §101. The Office Action states, "Merely determining deviations of an aspherical surface from a target shape would not appear to be sufficient to constitute a tangible result, since the outcome of the determination step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized." (Office Action at p. 2.) The Office Action further states that in assessing a §101 inquiry in this regard, "the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is useful, tangible, and concrete." (Office Action at p. 2, citing OG Notices: 22 November 2005, emphasis original.)

Claims 1, 19 and 20, each recite a method of processing an optical element including, among other aspects, determining (first and/or second) deviations of a (spherical and/or aspherical) surface of the optical element from a target shape thereof in dependence on a (first and/or second) measurement. Applicants respectfully submit that the pending claims are directed to statutory subject matter and request that the rejection be withdrawn, as discussed below.

The claimed invention is useful, tangible and concrete. A result of the methods recited in the independent claims is an optical element whose surface has been measured to determine its deviations from a target shape thereof. Thus, the claims recite useful subject matter at least because surface quality of the optical element has been determined. It will be

appreciated that determination of surface quality provides an indication of whether such an optical element meets design and performance requirements for a subsequent use. As discussed in the specification, in order to process a desired optical element, “it is necessary to compare the shape of the machined optical surface with its target shape, and to determine the differences between the machined and target surfaces” (specification at page 1, lines 25-31). As also noted in the specification, prior art techniques use “plural lenses of a high diameter with the necessary precision [, which] is not only expensive but also demanding from its optical design” (specification at page 3, lines 33-35). The present application describes “an improved method of manufacturing an optical surface” (specification at page 4, lines 10-11). Accordingly, the claimed invention provides a useful final result of an optical element whose surface has been measured to determine its deviations from a target shape thereof and that is processed with an improved method which overcomes disadvantages in the prior art.

The result of the claimed methods - an optical element whose surface has been measured to determine its deviations from a target shape thereof – is also tangible and concrete. Certainly, an optical element is tangible and concrete. Moreover, the recited methods yield an optical element whose surface has been measured and qualified to determine the extent to which its surface deviates from target dimensions. This makes the result even further tangible and concrete at least because, for example, the optical element’s now measured surface quality provides an indication of whether the optical element meets whatever design requirements may be required.

Even the Office appears to have reservations about the rejection, stating in wavering language, “Merely determining deviations of an aspherical surface from a target shape would not appear to be sufficient to constitute a tangible result . . .” (Emphasis added.) In fact, for

at least the reasons noted above, the claims do recite useful, tangible and concrete subject matter.

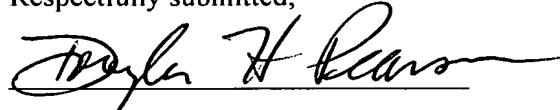
Moreover the rejection is further flawed at least because it ignores subject matter recited in various dependent claims involving machining the surface in dependence on first and/or second deviations (claims 6, 7, 9-11) and applying a coating to the surface (claims 8, 13, 14). The Office has not even addressed the subject matter recited in these claims, and indeed, any hypothetical §101 rejection of this subject matter would not be supportable.

New claims 21-24 have been added herein and are allowable at least by virtue of dependency.

Conclusion

For at least the foregoing reasons, withdrawal of the rejection of claims 1-20 under 35 U.S.C. §101 and allowance of claims 1-24 is respectfully requested. Should there be any questions in connection with this application, the examiner is invited to contact the undersigned at the number below.

Respectfully submitted,



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